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EXAMINER
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ABDALLA, KHALID M

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2419

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,789	<b>Applicant(s)</b> HASEGAWA ET AL.	
	<b>Examiner</b> KHALID ABDALLA	<b>Art Unit</b> 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/21/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 2-4 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "...the transport protocol...." in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "...the smallest size...." in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "...the smallest size...." in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "...the transport protocol...." in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 8, 14-15, 17, 22, 24, 30-31 and 50-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Dorward et al (US 20030018878 A1).

Regarding claim 1 Dorward et al discloses a communication device (Fig. 2 shows server 104) comprising.

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A memory (Fig. 2 shows a memory 202)

A processor (Fig. 2 shows a processor 200)

Wherein the processor is configured to execute instructions stored in the memory to a function of storing (memory 202 stores one or more software programs which are executable by the processor 200 in conjunction with provision of the archival data storage techniques see [0025] lines 7-10)

divide original data into a plurality of blocks (the server 104, the storage of data blocks is separated from the index used to locate the blocks, as is also apparent from FIG. 1. More particularly, blocks are stored in an append-only log on storage element 116. See [0041] lines 1-5 and Fig. 5) and store information within a header for restoring the plurality of blocks to the original data (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1; etc. that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9).

Regarding claim 6 Dorward et al discloses a communication device (Fig. 2 shows server 104) comprising.

A memory (Fig. 2 shows a memory 202); and

a processor (Fig. 2 shows a processor 200)

Wherein the processor is configured to execute instructions stored in the memory

(Moreover, memory 202 stores one or more software programs which are executable by

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the processor 200 in conjunction with provision of the archival data storage techniques see [0025] lines 7-10)

to receive a plurality of blocks and, based on information stored within a header, restore the plurality of blocks to original data (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1; etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9).

Regarding claim8 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the information stored within the header is stored in an option field (header 308 of fig. 3 shows fields) option the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Regarding claim14 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the processor (Fig. 2 shows a processor 200) is further configured to execute instructions to transfer the plurality of blocks (memory 202 stores one or more software programs which are executable by the processor 200 in conjunction with provision of the archival data storage techniques see [0025] lines 7-10) based on a communication rate (The write performance of the server is therefore limited to the random access performance of the index 114, speedup in throughput can be achieved by striping the index see [0055] lines 8-15)

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Regarding claim 15 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the original data is configured to be restored by referring to the information for restoring the plurality of blocks to the original data within the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Regarding claim 17 Dorward et al discloses a method comprising:  
using a communication device (Fig. 2 shows server 104) to:  
divide original data into a plurality of blocks (the server 104, the storage of data blocks is separated from the index used to locate the blocks, as is also apparent from FIG. 1. More particularly, blocks are stored in an append-only log on storage element 116. See [0041] lines 1-5 and Fig. 5); and  
store information within a header for restoring the plurality of blocks to the original data (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1; etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Regarding claim 22 Dorward et al discloses a communication method: comprising:  
using a communication device (Fig. 2 shows server 104)to:  
execute instructions stored in the memory (memory 202 stores one or more software

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programs which are executable by the processor 200 in conjunction with provision of the archival data storage techniques see [0025] lines 7-10)

to receive a plurality of blocks and, based on information stored within a header, restore the plurality of blocks to original data (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1; etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Regarding claim24 Dorward et al discloses the method, wherein the information stored within the header is stored in an option field (header 308 of fig. 3 shows fields) of the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Regarding claim 30 Dorward et al discloses the method, further comprising using the communication device (Fig. 2 shows server 104) to transfer the plurality of blocks based on a communication rate (The write performance of the server is therefore limited to the random access performance of the index 114, speedup in throughput can be achieved by striping the index see [0055] lines 8-15)

Regarding claim31 Dorward et al discloses the method, wherein the original data is configured to be restored by referring to the information for restoring the plurality of blocks to the original data within the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the

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corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Regarding claim 50 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the communication device is a proxy server (the server 104 may be distributed across multiple machines. The approach of identifying data by a hash of its contents simplifies such an extension. Such load balancing could even be hidden from the client application by interposing a proxy server that performs this operation on behalf of the client see [0076] lines 1-10).

Regarding claim 51 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the information stored within the header comprises a sequence number and a block size (A given block header 308 includes a "magic" number, the fingerprint of the data block, a user-supplied type identifier, the size of the data block, the identity of the client device or other user that wrote the data block, and the time when the block was first written, the latter being denoted "wtime." See [0045] lines 1-6)

Regarding claim 52 Dorward et al does not disclose the method wherein the communication device receives the plurality of blocks at different communication rates. Itakura et al from the same or similar endeavor teach (it is necessary for a transmission side to generate data having different formats corresponding to the performance of data receiving terminals or to prepare different data at the transmission rates of the data receiving terminals. When the above-described scalable encoding is applied, data distribution is made possible at the same time from one file to terminals having different performance see [0007] lines 1-8) Thus it would have been obvious to one of ordinary



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skill in the art to implement the method of Itakura et al in the system of Dorward et al. The method Dorward et al can be implemented on any type of method wherein the communication device receives the plurality of blocks at different communication rates which is taught by Itakura with a motivation to efficiently process data by referring to the priority level information specified.

Regarding claim 53 Dorward et al discloses the communication method, wherein the communication device is a proxy server (the server 104 may be distributed across multiple machines. The approach of identifying data by a hash of its contents simplifies such an extension. Such load balancing could even be hidden from the client application by interposing a proxy server that performs this operation on behalf of the client see [0076] lines 1-10).

Regarding claim 54 Dorward et al discloses the method, wherein the information stored within the header comprises a sequence number and a block size (A given block header 308 includes a "magic" number, the fingerprint of the data block, a user-supplied type identifier, the size of the data block, the identity of the client device or other user that wrote the data block, and the time when the block was first written, the latter being denoted "wtime." See [0045] lines 1-6)

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-5,7,9,12-13,18-21,23 and 25 ,and are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorward et al (US 20030018878 A1) in view of Firestone (US 6965646 B1).

Regarding claim2 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the information for restoring the plurality of blocks to the original data is stored in an option field (header 308 of fig. 3 shows fields) within the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Dorward et al does not discloses the header of the transport protocol .Firestone from the same or similar endeavor teach (The network packet header includes additional information useful for transmission in the network 106. An input buffer 108 may also be included for temporarily holding the data before streaming onto the network 106. Upon request, the network interface 105 sends the packetized RTP packets onto the network 106 in real-time see coln: 1 line 57-63). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein the header is a header of the transport protocol which is taught by Firestone with a motivation in order to reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

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Regarding claim 3 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the processor (Fig. 2 shows a processor 200)

Dorward does not disclose the processor further configured to execute instructions to examine maximum values of a packet size allowed by a connection related to communication and unify the smallest size among the packet size maximum values as a maximum value of an allowable packet size. Firestone from the same or similar endeavor teaches (The packetizer 104 will fragment or aggregate media packets into network packets according to their respective sizes. Media packets are generally described as constant-sized packets containing either video or audio data. Specifically, if the size of a media packet in media file 102 is larger than the optimal network packet size, the packetizer 104 will fragment the large media packet into two or more successive network packets. On the other hand, if the size of a media packet in media file 102 is smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see col: 2 lines 49-59 and fig. 1A). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein the processor further configured to execute instructions to examine maximum values of a packet size allowed by a connection related to communication and unify the smallest size among the packet size maximum values as a maximum value of an allowable packet size which is taught by Firestone with a motivation to order to modify and reformat MPEG stream to facilitate RTP packetization.

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Regarding claim 4 Dorward et al discloses a communication device (Fig. 2 shows server 104),

Dorward et al does not disclose wherein the processor is further configured to execute instructions to examine maximum values of a packet size allowed by a connection related to communication and communicate with a packet size equal to or less than the smallest size among the packet size maximum values. Firestone from the same or similar endeavor teach (The packetizer 104 will fragment or aggregate media packets into network packets according to their respective sizes. Media packets are generally described as constant-sized packets containing either video or audio data. Specifically, if the size of a media packet in media file 102 is larger than the optimal network packet size, the packetizer 104 will fragment the large media packet into two or more successive network packets. On the other hand, if the size of a media packet in media file 102 is smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see col: 2 lines 49-59 and fig. 1A). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein the processor is further configured to execute instructions to examine maximum values of a packet size allowed by a connection related to communication and communicate with a packet size equal to or less than the smallest size among the packet size maximum values which is taught by Firestone with a motivation to order to modify and reformat MPEG stream to facilitate RTP packetization.

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Regarding claim 5 Dorward et al discloses a communication device (Fig. 2 shows server 104),

Dorward et al does not disclose wherein a data length is stored as information for restoring the original data. Firestone from the same or similar endeavor teach (the network packet information inside each GOP header 304 contains the starting byte indexes and lengths of each RTP data packet from the GOP. By knowing the exact location of each MPEG file data packet, the streamer 250 may expeditiously copy the data in blocks when repacketizing from the MPEG file to RTP packets see col: 10 lines 16-22). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein a data length is stored as information for restoring the original data which is taught by Firestone with a motivation in order to modify and reformat MPEG stream to facilitate RTP packetization.

Regarding claim 7 Dorward et al discloses a communication device (Fig. 2 shows server 104) Dorward et al does not disclose wherein the header is a header of the transport protocol. Firestone from the same or similar endeavor teach (The network packet header includes additional information useful for transmission in the network 106. An input buffer 108 may also be included for temporarily holding the data before streaming onto the network 106. Upon request, the network interface 105 sends the packetized RTP packets onto the network 106 in real-time see coln: 1 lines 57-63). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be

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implemented on any type of method wherein the header is a header of the transport protocol which is taught by Firestone with a motivation in order to reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

Regarding claim9 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the information stored within the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9)

Dorward et al does not discloses the stored in a part of a timestamp field of an option field within the header .Firestone from the same or similar endeavor teach

(The RTP header contains RTP header information used by the streamer 250 before the data is sent onto the network 204. In one embodiment, the RTP header may include RTP header parameters specified later upon streaming. Subsequently, upon transmission onto the network 204, these RTP header parameters may be modified by the streamer 250. By way of example, each RTP packet sent onto the network 204 contains a sequence number and an RTP timestamp see coln: 12 lines 4-12) Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method the stored in a part of a timestamp field of an option field within the header which is taught by Firestone with a motivation in order to

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reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

Regarding claim 12 Dorward et al discloses a communication device (Fig. 2 shows server 104),

Dorward et al does not disclose wherein the processor is configured to execute instructions stored in the memory to examine Maximum Transfer Unit (MTU) usable by the plurality of connections by a path MTU discovery option and unify MTU of the respective connections to the smallest MTU obtained by the examination. Firestone from the same or similar endeavor teach wherein the processor is configured to execute instructions stored in the memory to examine Maximum Transfer Unit (MTU) ( The segmentor 222 will create network packets that have as many bytes as possible without going over the MTU size. To create the network packets, the segmenter 222 reads data out of the audio buffer 211 and video buffer 213. Typically, the system stream 202, its corresponding elementary video stream 210 and the elementary audio stream 208 contain constant sized MPEG packets.see coln: 8 lines 43-50)

usable by the plurality of connections by a path MTU discovery option and unify MTU of the respective connections to the smallest MTU obtained by the examination (if the size of a media packet in media file 102 is smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see col: 2 lines 56-59. Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein the processor is

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configured to execute instructions stored in the memory to examine Maximum Transfer Unit (MTU) usable by the plurality of connections by a path MTU discovery option and unify MTU of the respective connections to the smallest MTU obtained by the examination which is taught by Firestone with a motivation in order to reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

Regarding claim 13 Dorward et al discloses a communication device (Fig. 2 shows server 104), wherein the processor (Fig. 2 shows a processor 200) is configured to execute instructions stored in the memory (memory 202 stores one or more software programs which are executable by the processor 200 in conjunction with provision of the archival data storage techniques see [0025] lines 7-10)

Dorward et al does not disclose refer to a data length to restore the plurality of blocks to the original data. Firestone from the same or similar endeavor teach

(the network packet information inside each GOP header 304 contains the starting byte indexes and lengths of each RTP data packet from the GOP. By knowing the

exact location of each MPEG file data packet, the streamer 250 may expeditiously copy the data in blocks when repacketizing from the MPEG file to RTP packets see col: 10

lines 16-22). Thus it would have been obvious to one of ordinary skill in the art to

implement the method of Firestone in the system of Dorward et al .The method of

Dorward et al can be implemented on any type of method refer to a data length to

restore the plurality of blocks to the original data which is taught by Firestone with a

motivation in order to modify and reformat MPEG stream to facilitate RTP packetization



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Regarding claim 18 Dorward et al discloses the method, wherein the information for restoring the plurality of blocks to the original data is stored in an option field header 308 of fig. 3 shows fields) within the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9). Dorward et al does not discloses the header of the transport protocol .Firestone from the same or similar endeavor teach (The network packet header includes additional information useful for transmission in the network 106. An input buffer 108 may also be included for temporarily holding the data before streaming onto the network 106. Upon request, the network interface 105 sends the packetized RTP packets onto the network 106 in real-time see coln: 1 lines 57-63). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein the header is a header of the transport protocol which is taught by Firestone with a motivation in order to reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

Regarding claim 19 Dorward et al discloses the method; further comprising using the communication device (Fig. 2 shows server 104)

Dorward dose not disclose the device to examine maximum values of a packet size allowed by a connection related to communication and unify the smallest size among the packet size maximum values as a maximum value of an allowable packet size.

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Firestone from the same or similar endeavor teach (The packetizer 104 will fragment or aggregate media packets into network packets according to their respective sizes.

Media packets are generally described as constant-sized packets containing either video or audio data. Specifically, if the size of a media packet in media file 102 is larger than the optimal network packet size, the packetizer 104 will fragment the large media packet into two or more successive network packets. On the other hand, if the size of a media packet in media file 102 is smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see col: 2 lines 49-59 and fig. 1A). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method to examine maximum values of a packet size allowed by a connection related to communication and unify the smallest size among the packet size maximum values as a maximum value of an allowable packet size which is taught by Firestone with a motivation to order to modify and reformat MPEG stream to facilitate RTP packetization.

Regarding claim 20 Dorward et al discloses the method, further comprising using the communication device (Fig. 2 shows server 104),

Dorward et al does not disclose the device to examine maximum values of a packet size allowed by a connection related to communication and communicating with a packet size equal to or less than the smallest size among the packet size maximum values. Firestone from the same or similar endeavor teach (The packetizer 104 will fragment or aggregate media packets into network packets according to their respective

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sizes. Media packets are generally described as constant-sized packets containing either video or audio data. Specifically, if the size of a media packet in media file 102 is larger than the optimal network packet size, the packetizer 104 will fragment the large media packet into two or more successive network packets. On the other hand, if the size of a media packet in media file 102 is smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see col: 2 lines 49-59 and fig. 1A). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method to examine maximum values of a packet size allowed by a connection related to communication and communicating with a packet size equal to or less than the smallest size among the packet size maximum values which is taught by Firestone with a motivation to order to modify and reformat MPEG stream to facilitate RTP packetization.

Regarding claim 21 Dorward et al does not disclose the method, wherein a data length is stored as the information for restoring the original data, Firestone from the same or similar endeavor teach (the network packet information inside each GOP header 304 contains the starting byte indexes and lengths of each RTP data packet from the GOP. By knowing the exact location of each MPEG file data packet, the streamer 250 may expeditiously copy the data in blocks when repacketizing from the MPEG file to RTP packets see col: 10 lines 16-22). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method

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wherein a data length is stored as information for restoring the original data which is taught by Firestone with a motivation in order to modify and reformat MPEG stream to facilitate RTP packetization.

Regarding claim 23 Dorward et al does not disclose the method, wherein the header is a header of the transport protocol. Firestone from the same or similar endeavor teach (The network packet header includes additional information useful for transmission in the network 106. An input buffer 108 may also be included for temporarily holding the data before streaming onto the network 106. Upon request, the network interface 105 sends the packetized RTP packets onto the network 106 in real-time see coln: 1 lines 57-63). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein the header is a header of the transport protocol which is taught by Firestone with a motivation in order to reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

Regarding claim 25 Dorward et al discloses the method, wherein the information stored within the header (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9) Dorward et al does not disclose the stored in a part of a timestamp field of an option field within the header .Firestone from the same or similar endeavor teach

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(The RTP header contains RTP header information used by the streamer 250 before the data is sent onto the network 204. In one embodiment, the RTP header may include RTP header parameters specified later upon streaming. Subsequently, upon transmission onto the network 204, these RTP header parameters may be modified by the streamer 250. By way of example, each RTP packet sent onto the network 204 contains a sequence number and an RTP timestamp see coln: 12 lines 4-12) Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method the stored in a part of a timestamp field of an option field within the header which is taught by Firestone with a motivation in order to reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

Regarding claim 28 Dorward et al discloses the method; further comprising using the communication device (Fig. 2 shows server 104) to examine an MTU usable by the plurality of connections by a path MTU discovery option and MTU of the respective connections to the smallest MTU obtained by the examination.

Dorward et al does not disclose the device to examine an MTU usable by the plurality of connections by a path MTU discovery option and MTU of the respective connections to the smallest MTU obtained by the examination. Firestone from the same or similar endeavor teach the device to examine an MTU usable by the plurality of connections by a path MTU discovery option and MTU of the respective connections to the smallest MTU obtained by the examination (if the size of a media packet in media file 102 is

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smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see col:2 lines 56-59 Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al . The method of Dorward et al can be implemented on any type of method to examine an MTU usable by the plurality of connections by a path MTU discovery option and MTU of the respective connections to the smallest MTU obtained by the examination. which is taught by Firestone with a motivation in order to reformatting MPEG data within RTP packets and streams the data onto the network for real-time playback.

Regarding claim 29 Dorward et al discloses the method, further comprising using the communication device (Fig. 2 shows server 104)

Dorward et al does not disclose refer to a data length to restore the plurality of blocks to the original data. Firestone from the same or similar endeavor teach

(the network packet information inside each GOP header 304 contains the starting byte indexes and lengths of each RTP data packet from the GOP. By knowing the exactlocation of each MPEG file data packet, the streamer 250 may expeditiously copy the data in blocks when repacketizing from the MPEG file to RTP packets see col: 10 lines 16-22). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Dorward et al .The method of Dorward et al can be implemented on any type of method refer to a data length to restore the plurality of blocks to the original data which is taught by Firestone with a motivation in order to modify and reformat MPEG stream to facilitate RTP packetization

6. Claims 10-11,26-27and are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorward et al (US 20030018878 A1) in view of Itakura et al (20030118107 A1).

Regarding claim10 Dorward et al discloses a communication device (Fig. 2 shows server 104),

Dorward et al does not discloses wherein stored within the header is an IP header.

Itakura et al from the same or similar endeavor teach (An IP header is further added to the packet to which the RTP header has been added. FIG. 14 shows details of the IP

header in an IP packet. The IP header includes a version, such as IPv4 or IPv6, a header length, a type-of-service (TOS) field which stores priority-level information, a packet length, an identification, a flag indicating control information related to data division (fragment) in an IP layer, a fragment offset indicating the location of divided (fragmented) data, time to live (TTL) indicating the information of time until the data is discarded see [0140] lines 1-10). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Itakura et al in the system of Dorward et al.

The method of Dorward et al can be implemented on any type of method wherein stored within the header is an IP header which is taught by Itakura with a motivation to efficiently process data by referring to the priority level information specified in an IP header.

Regarding claim11 Dorward et al discloses a communication device (Fig. 2 shows server 104),

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Dorward et al does not disclose wherein information for restoring the plurality of blocks to the original data is stored in a fragment field within an IP header. Itakura et al from the same or similar endeavor teach (An IP header is further added to the packet to which the RTP header has been added. FIG. 14 shows details of the IP header in an IP packet. The IP header includes a version, such as IPv4 or IPv6, a header length, a type-of-service (TOS) field which stores priority-level information, a packet length, an identification, a flag indicating control information related to data division (fragment) in an IP layer, a fragment offset indicating the location of divided (fragmented) data, time to live (TTL) indicating the information of time until the data is discarded see [0140] lines 1-10). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Itakura et al in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein information for restoring the plurality of blocks to the original data is stored in a fragment field within an IP header which is taught by Itakura with a motivation to efficiently process data by referring to the priority level information specified in an IP header.

Regarding claim 26 Dorward et al does not disclose wherein stored within the header is an IP header. Itakura et al from the same or similar endeavor teach (An IP header is further added to the packet to which the RTP header has been added. FIG. 14 shows details of the IP header in an IP packet. The IP header includes a version, such as IPv4 or IPv6, a header length, a type-of-service (TOS) field which stores priority-level information, a packet length, an identification, a flag indicating control information related to data division (fragment) in an IP layer, a fragment offset indicating



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the location of divided (fragmented) data, time to live (TTL) indicating the information of time until the data is discarded see [0140] lines 1-10). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Itakura et al in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein stored within the header is an IP header which is taught by Itakura with a motivation to efficiently process data by referring to the priority level information specified in an IP header.

Regarding claim 27 Dorward et al does not disclose wherein information for restoring the plurality of blocks to the original data is stored in a fragment field within an IP header. Itakura et al from the same or similar endeavor teach (An IP header is further added to the packet to which the RTP header has been added. FIG. 14 shows details of the IP header in an IP packet. The IP header includes a version, such as IPv4 or IPv6, a header length, a type-of-service (TOS) field which stores priority-level information, a packet length, an identification, a flag indicating control information related to data division (fragment) in an IP layer, a fragment offset indicating the location of divided (fragmented) data, time to live (TTL) indicating the information of time until the data is discarded see [0140] lines 1-10). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Itakura et al in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein information for restoring the plurality of blocks to the original data is stored in a fragment field within an IP header which is taught by Itakura with a motivation to efficiently process data by referring to the priority level information specified in an IP header.

7. Claims 16 and 32 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorward et al (US 20030018878 A1) in view of Asai (US 20030169759 A1).

Regarding claim 16 Dorward et al discloses a communication device (Fig. 2 shows server 104), a function wherein the processor (Fig. 2 shows a processor 200) Dorward et al does not disclose the processor is further configured to execute instructions to reduce a volume of data to be transferred to when a TCP communication rate is low, and increase the volume of data to be transferred to when the TCP communication rate becomes high. Asai from the same or similar endeavor teach (the processing performed by the receiving end communication equipment, the received data is temporarily transferred to the receiving window and then transferred to the buffer designated by the application task. As a result, the number of times of data transfer increases. Due to this, load on the CPU and hardware necessary for the TCP/IP protocol processing increases to thereby disadvantageously increase power consumption, and it is difficult to secure an empty size in the receiving window of the receiving end communication equipment to thereby disadvantageously decrease data communication rate see[0008]. Thus it would have been obvious to one of ordinary skill in the art to implement the method of Asai in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method the processor is further configured to execute instructions to reduce a volume

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of data to be transferred to when a TCP communication rate is low, and increase the volume of data to be transferred to when the TCP communication rate becomes high which is taught by Asai with a motivation to increasing a communication processing rate if data is received from a network using TCP/IP.

Regarding claim 32 Dorward et al discloses the method, further comprising using the communication device (Fig. 2 shows server 104)

Dorward et al does not disclose the device to reduce a volume of data to be transferred to when a TCP communication rate is low, and increase the volume of data to be transferred to each connection at one time when the TCP communication rate becomes high. Asai from the same or similar endeavor teach (the processing performed by the receiving end communication equipment, the received data is temporarily transferred to the receiving window and then transferred to the buffer designated by the application task. As a result, the number of times of data transfer increases. Due to this, load on the CPU and hardware necessary for the TCP/IP protocol processing increases to thereby disadvantageously increase power consumption, and it is difficult to secure an empty size in the receiving window of the receiving end communication equipment to thereby disadvantageously decrease data communication rate see[0008]. Thus it would have been obvious to one of ordinary skill in the art to implement the method of Asai in the system of Dorward et al. The method of Dorward et al can be implemented on any type of method wherein the device to reduce a volume of data to be transferred to when a TCP communication rate is low, and increase the volume of data to be transferred to each connection at one time when the TCP communication rate becomes high which is

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taught by Asai with a motivation to increasing a communication processing rate if data is received from a network using TCP/IP.

8. Claims 35-37 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Itakura et al (20030118107 A1) in view of Dorward et al (US 20030018878 A1) as applied in claim 33 above and further in view of Firestone (US 6965646 B1).

Regarding claim 35 Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]),

Itakura et al and Dorward et al does not disclose further comprising computer code for examining maximum values of a packet size allowed by a connection related to communication and comprising computer code for unifying the smallest size among the packet size maximum values as a maximum value of an allowable packet size.

Firestone from the same or similar endeavor teach (The packetizer 104 will fragment or aggregate media packets into network packets according to their respective sizes.

Media packets are generally described as constant-sized packets containing either video or audio data. Specifically, if the size of a media packet in media file 102 is larger than the optimal network packet size, the packetizer 104 will fragment the large media

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packet into two or more successive network packets. On the other hand, if the size of a media packet in media file 102 is smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see col: 2 lines 49-59 and fig. 1A). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Itakura et al and Dorward et al. The method of Itakura et al and Dorward et al can be implemented on any type of method further comprising computer code for examining maximum values of a packet size allowed by a connection related to communication and comprising computer code for unifying the smallest size among the packet size maximum values as a maximum value of an allowable packet size which is taught by Firestone with a motivation to order to modify and reformat MPEG stream to facilitate RTP packetization.

Regarding claim 36 Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]),

Itakura et al and Dorward et al does not disclose further comprising computer code for examining maximum values of a packet size allowed by a connection related to communication and comprising computer code for communicating with a packet size equal to or less than the smallest size among the packet size maximum values.

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Firestone from the same or similar endeavor teach (The packetizer 104 will fragment or aggregate media packets into network packets according to their respective sizes.

Media packets are generally described as constant-sized packets containing either video or audio data. Specifically, if the size of a media packet in media file 102 is larger than the optimal network packet size, the packetizer 104 will fragment the large media packet into two or more successive network packets. On the other hand, if the size of a media packet in media file 102 is smaller than the optimal network packet size, packetizer 104 may aggregate two or more media packets into a single network packet see coln: 2 lines 49-59 and fig. 1A). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Itakura et al and Dorward et al. The method of Itakura et al and Dorward et al can be implemented on any type of method further comprising computer code for examining maximum values of a packet size allowed by a connection related to communication and comprising computer code for communicating with a packet size equal to or less than the smallest size among the packet size maximum values which is taught by Firestone with a motivation to order to modify and reformat MPEG stream to facilitate RTP packetization.

Regarding claim 37 Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a

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computer-readable form, the computer system executes processing according to the program see [0072]),

Itakura et al and Dorward et al does not disclose further comprising computer code for storing a data length as the information for restoring the original data. Firestone from the same or similar endeavor teach (the network packet information inside each GOP header 304 contains the starting byte indexes and lengths of each RTP data packet from the GOP. By knowing the exact location of each MPEG file data packet, the streamer 250 may expeditiously copy the data in blocks when repacketizing from the MPEG file to RTP packets see col: 10 lines 16-22). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Firestone in the system of Itakura et al and Dorward et al .the method of Itakura et al and Dorward et al can be implemented on any type of method wherein a data length is stored as information for restoring the original data which is taught by Firestone with a motivation in order to modify and reformat MPEG stream to facilitate RTP packetization.

9. Claims 48 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Itakura et al (20030118107 A1) in view of Dorward et al (US 20030018878 A1) as applied in claim 33 above and further in view of Asai (US 20030169759 A1).

Regarding claim 48 Itakura et al disclose a computer program product further comprising computer code (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute

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various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072])

Itakura et al and Dorward et al does not disclose for a volume of data to be transferred when a TCP communication rate is low, to increasing the volume of data to be transferred when the TCP communication rate becomes high. Asai from the same or similar endeavor teach (the processing performed by the receiving end communication equipment, the received data is temporarily transferred to the receiving window and then transferred to the buffer designated by the application task. As a result, the number of times of data transfer increases. Due to this, load on the CPU and hardware necessary for the TCP/IP protocol processing increases to thereby disadvantageously increase power consumption, and it is difficult to secure an empty size in the receiving window of the receiving end communication equipment to thereby disadvantageously decrease data communication rate see[0008]. Thus it would have been obvious to one of ordinary skill in the art to implement the method of Asai in the system of Itakura et al and Dorward et al .The method of Itakura et al and Dorward et al can be implemented on any type of method for a volume of data to be transferred when a TCP communication rate is low, to increasing the volume of data to be transferred when the TCP communication rate becomes high which is taught by Asai with a motivation to increasing a communication processing rate if data is received from a network using TCP/IP.



10. Claims 33-34,38-39,42-43,46,49,52,55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itakura et al (20030118107 A1) in view of Dorward et al (US 20030018878 A1).

Regarding claim 33 Itakura et al discloses a computer program product embodied on a computer-readable storage medium, comprising: (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072])

Itakura et al does not disclose computer code for dividing original data into a plurality of blocks; and computer code for storing information within a header for restoring the plurality of blocks to the original data. Dorward et al discloses from the same or similar endeavor teach computer code for dividing original data into a plurality of blocks (the server 104, the storage of data blocks is separated from the index used to locate the blocks, as is also apparent from FIG. 1. More particularly, blocks are stored in an append-only log on storage element 116. See [0041] lines 1-5 and Fig. 5); and computer code for storing information within a header for restoring the plurality of blocks to the original data (Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1; etc. that describes the contents of the corresponding

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block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Dorward et al in the system of Itakura et al the method of Itakura et al can be implemented in any type of method wherein computer code for dividing original data into a plurality of blocks; and computer code for storing information within a header for restoring the plurality of blocks to the original data which is taught by Dorward et al with a motivation in order to provide a substantially unique identifier of the data block by applying a collision-resistant hash function to the contents of the data block by utilizing the identifier to perform a lookup of the address in an index.

Regarding claim 34 note that Itakura et al discloses modified by Dorward et al teach the computer program product (Itakura et al: A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]) the information for restoring the plurality of blocks to the original data is stored in an option field (Dorward et al :Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1, etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9) within the header of the transport

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protocol (Itakura et al: The data transmission apparatus may be configured such that the packet generation parts specify the priority-level information corresponding to the layer of the scalable-encoded data of the image signal, in an RTP header see [0030] lines 1-5)

Regarding claim 38 Itakura et al disclose a computer program product embodied on a computer- readable storage medium comprising; (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072])

Itakura et al does not discloses computer code for receiving a plurality of blocks and, based on information stored within a header; and computer code for restoring the plurality of blocks to original data . Dorward et al from the same or similar endeavor teach ((Each data block is prefixed by a header, denoted headers.sub.0, header.sub.1; etc.that describes the contents of the corresponding block. The primary purpose of the block header is to provide integrity checking during normal operation and to assist in data recovery see [0043] lines 4-9) Thus it would have been obvious to one of ordinary skill in the art to implement the method of Dorward et al in the system of Itakura et al the method of Itakura et al can be implemented in any type of method for receiving a plurality of blocks and, based on information stored within a header; and computer code for restoring the plurality of blocks to original data which is taught by Dorward et

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al with a motivation in order to provide a substantially unique identifier of the data block by applying a collision-resistant hash function to the contents of the data block by utilizing the identifier to perform a lookup of the address in an index.

Regarding claim 39 note that Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]), wherein the header is a header of the transport protocol (The data transmission apparatus may be configured such that the packet generation parts specify the priority-level information corresponding to the layer of the scalable-encoded data of the image signal, in an RTP header see [0030] lines 1-5)

Regarding claim 42 note that Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]),

Wherein the header is an IP header (An IP header is further added to the packet to which the RTP header has been added. FIG. 14 shows details of the IP header in an IP

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packet. The IP header includes a version, such as IPv4 or IPv6, a header length, a type-of-service (TOS) field which stores priority-level information see [0140] lines 1-6)

Regarding claim 43 note that Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]),,

wherein information for restoring the plurality of blocks to the original data is stored in a fragment field within an IP header (An IP header is further added to the packet to which the RTP header has been added. FIG. 14 shows details of the IP header in an IP packet. The IP header includes a version, such as IPv4 or IPv6, a header length, a type-of-service (TOS) field which stores priority-level information, a packet length, an identification, a flag indicating control information related to data division (fragment) in an IP layer, a fragment offset indicating the location of divided (fragmented) data, time to live (TTL) indicating the information of time until the data is discarded, a protocol (IP: 4, TCP: 7, UDP: 17, . . . ) used in an upper layer, a header checksum, a source IP address, and a destination IP address see [0140] lines 1-12)

Regarding claim 46 note that Itakura et al disclose the computer program product further comprising computer code (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which

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can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072])

Also note that Dorward et al teaches for transferring the plurality of blocks based on communication rate (The write performance of the server is therefore limited to the random access performance of the index 114, speedup in throughput can be achieved by striping the index see [0055] lines 8-15)

Regarding claim 52 Dorward et al does not disclose the method wherein the communication device receives the plurality of blocks at different communication rates. Itakura et al from the same or similar endeavor teach (it is necessary for a transmission side to generate data having different formats corresponding to the performance of data receiving terminals or to prepare different data at the transmission rates of the data receiving terminals. When the above-described scalable encoding is applied, data distribution is made possible at the same time from one file to terminals having different performance see [0007] lines 1-8) Thus it would have been obvious to one of ordinary skill in the art to implement the method of Itakura et al in the system of Dorward et al. The method Dorward et al can be implemented on any type of method wherein the communication device receives the plurality of blocks at different communication rates which is taught by Itakura with a motivation to efficiently process data by referring to the priority level information specified.

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Regarding claim 55 note that Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]), wherein the plurality of blocks are received at different communication rates teach (it is necessary for a transmission side to generate data having different formats corresponding to the performance of data receiving terminals or to prepare different data at the transmission rates of the data receiving terminals. When the above-described scalable encoding is applied, data distribution is made possible at the same time from one file to terminals having different performance see [0007] lines 1-8)

Regarding claim 56 note that Itakura et al disclose a computer program product, wherein the computer-readable storage medium (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]), Also note Dorward et al teaches is a proxy server (the server 104 may be distributed across multiple machines. The approach of identifying data by a hash of its contents simplifies

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such an extension. Such load balancing could even be hidden from the client application by interposing a proxy server that performs this operation on behalf of the client see [0076] lines 1-10).

Regarding claim 57 note that Itakura et al disclose a computer program product (A computer program according to the present invention can be provided, for example, for general-purpose computer systems which can execute various program codes, by storage media, communication media, such as networks, and recording media, such as CDs, FDs, and MOs, in a computer-readable form. When the program is provided in a computer-readable form, the computer system executes processing according to the program see [0072]). Also note that Dorward et al teaches wherein the information stored within the header comprises a sequence number and a block size (A given block header 308 includes a "magic" number, the fingerprint of the data block, a user-supplied type identifier, the size of the data block, the identity of the client device or other user that wrote the data block, and the time when the block was first written, the latter being denoted "wtime." See [0045] lines 1-6)

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(US 7042907 B2), (Matsunaga) discloses, Packet transfer apparatus and method.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHALID ABDALLA whose telephone number is (571)270-7526. The examiner can normally be reached on Monday - Friday.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/K. A./  
Examiner, Art Unit 2419

/DANG T TON/  
Supervisory Patent Examiner, Art Unit 2419/D. T. T./  
Supervisory Patent Examiner, Art Unit 2419